

*Expanding Technology™*

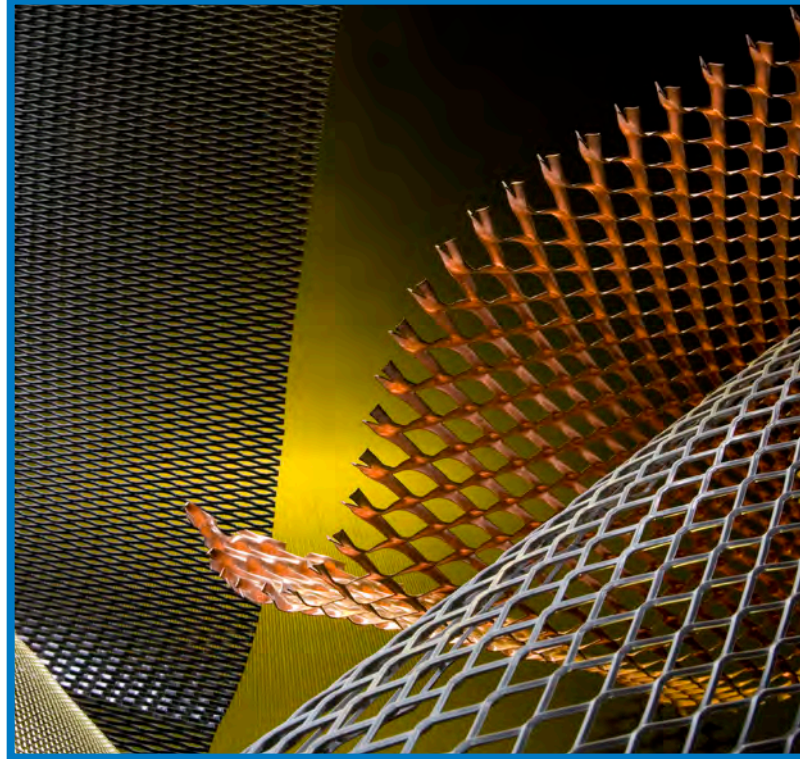
## Dexmet MicroGrid<sup>®</sup> EM Series of Expanded Metal Foils for EMI Shielding

The Dexmet MicroGrid<sup>®</sup> EM series of expanded metal foils (EMFs) are versatile, effective materials for shielding against electromagnetic interference (EMI).

EMFs are formed from solid metal foil in a proven, economical “slit-and-stretch” process. They are electrically continuous and, unlike knit or woven meshes, exhibit consistent and predictable conductivity.

Thin, strong, flexible and lightweight, EMFs will not fray or unravel, and conform readily to complex surfaces, making them well-suited to composite manufacturing processes. Standard configurations include copper, aluminum, nickel and Monel meshes at .002” and .003” (50 and 75µm) thicknesses. Dexmet can readily produce custom types using other metals and foil thicknesses, including Cu and Al types down to .001” (25µm) thick.

The open area of the mesh can be precision-tailored to meet user requirements for weight, resistivity, formability, and shielding effectiveness.



### Applications:

- ❖ Shielding enclosures
- ❖ Ventilation screens
- ❖ Laminated structures
- ❖ Gaskets
- ❖ Cable shielding
- ❖ Cockpit electronics

Type	Material	Thickness	Weight <sup>2</sup>		Open Area <sup>2</sup> (%)	Shielding effectiveness <sup>1</sup> (dB)		
			g/in <sup>2</sup>	g/m <sup>2</sup>		100 MHz	1 GHz	10 GHz
EM2Cu	Cu	.002" (50µm)	.139	215	53%	72	53	33
EM3Cu	Cu	.003" (75µm)	.158	245	64%	60	42	25
EM2Al	Al	.002" (50µm)	.042	65	53%	70	51	32
EM3Al	Al	.003" (75µm)	.048	74	64%	58	41	23
EM2Ni	Ni	.002" (50µm)	.138	214	53%	60	46	28
EM3Ni	Ni	.003" (75µm)	.157	243	64%	54	40	24
EM2ML	Monel	.002" (50µm)	.175	271	39%	67	53	36
EM3ML	Monel	.003" (75µm)	.255	395	41%	63	46	30

<sup>1</sup> Test method: ASTM D4935-10

<sup>2</sup> ±10%

Standard width of MicroGrid<sup>®</sup> EM expanded foils is 12" (305mm). Please inquire about other metals / alloys and custom configurations, widths, etc.

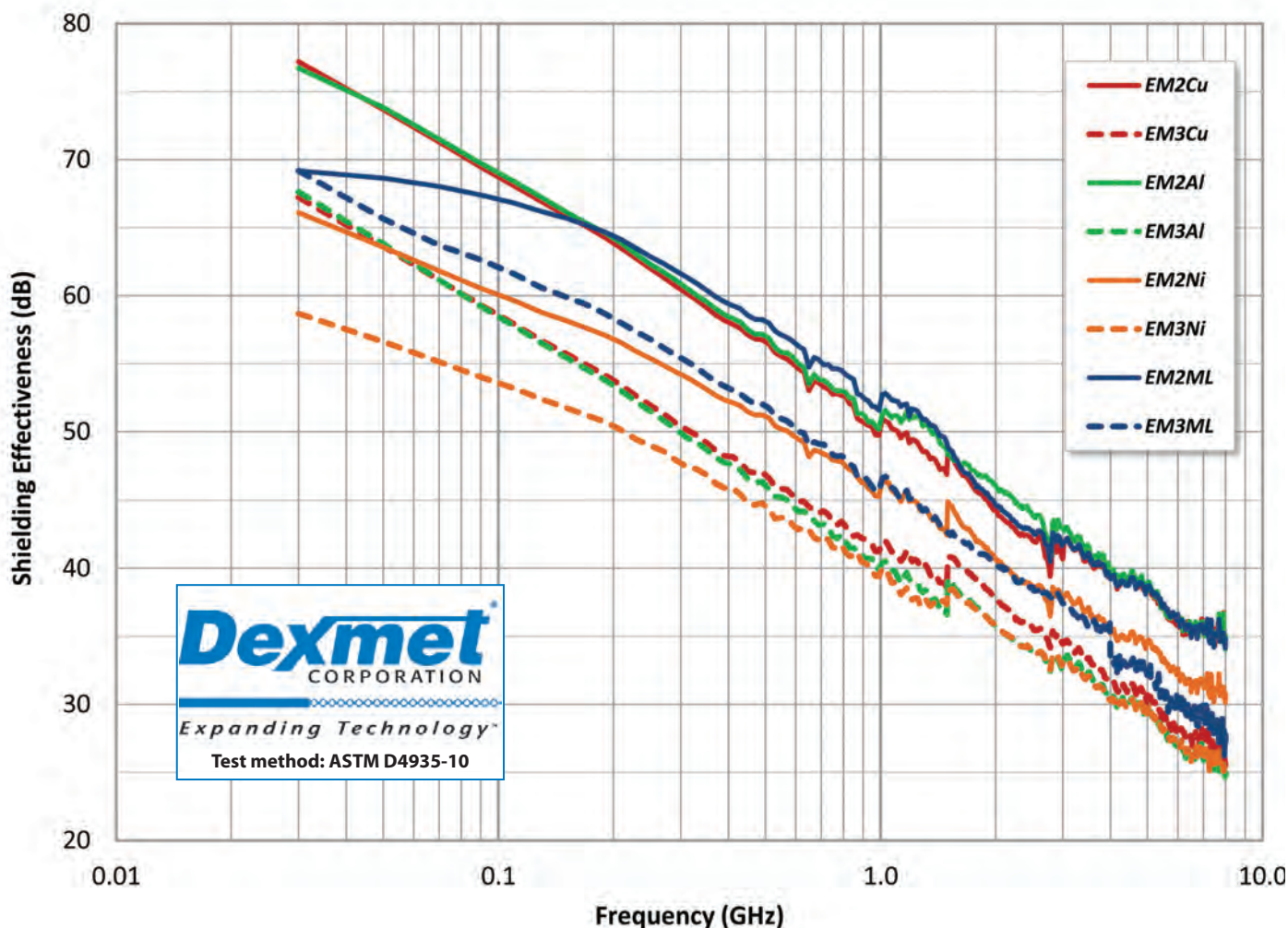
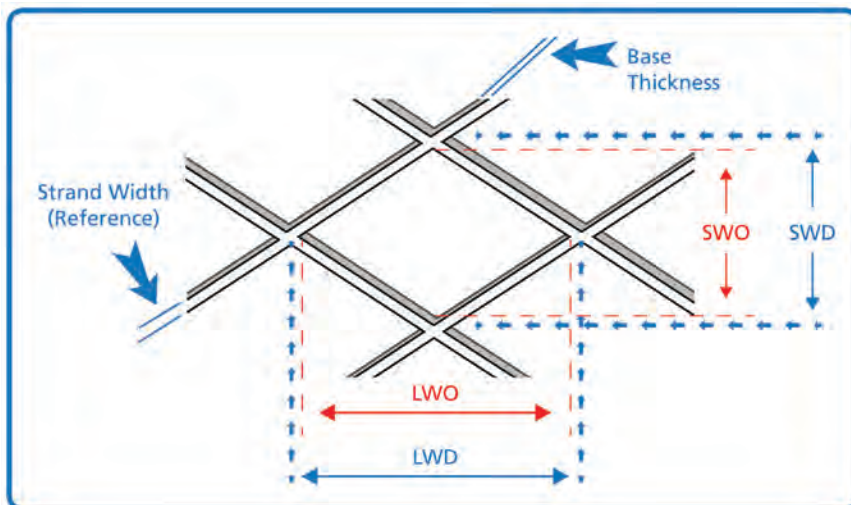
## Shielding Effectiveness

The key measure of merit for EMI shielding materials is “shielding effectiveness” (SE). SE is a measure of how well a material reduces (attenuates) electromagnetic field strength.

The SE of expanded metal foils is dependent on several factors, including:

- ❖ Material type
- ❖ Foil thickness
- ❖ Size of openings
- ❖ Openings per unit area

These parameters can be controlled during manufacture to yield meshes custom-tailored for weight, resistivity, formability, and shielding effectiveness.



Request the white paper “**Shielding Effectiveness of Expanded Metal Foils (EMFs)**” to learn how shielding effectiveness is measured, and how *MicroGrid*® EM expanded foils can be tailored to your requirements.